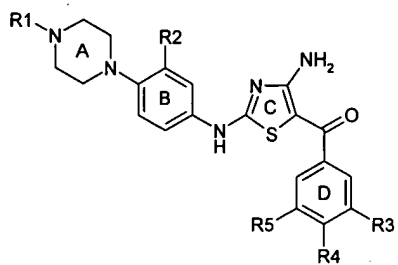


IN THE CLAIMS

Please cancel claims 58 and 59, and amend claims 16, 37, 45, 46, 47, 53 and 60 and add claim 65 to read as provided below.

1. (Original) A compound of formula:



or the pharmaceutically acceptable salts or esters thereof, wherein

R¹ is selected from the group consisting of

H,

lower alkyl that optionally may be substituted with a group selected from OR⁶, cycloalkyl, and NR⁷R⁸,

cycloalkyl,

COR⁹, and

SO₂R¹⁰;

Q³ R² is selected from the group consisting of

H,
F,
Cl, and
CH₃;

R³, R⁴ and R⁵ are each independently selected from the group consisting of

H,
lower alkyl, which optionally may be substituted with a group selected from
OR⁶ and NR⁷R⁸,
OR¹¹,
NR¹²R¹³,
halogen,
NO₂,
CONR⁶R⁹,
NHSO₂R¹⁴,
CN
S-lower alkyl,
OCF₃, and
OCHF₂,

or alternatively, R³ and R⁴ taken together with the two carbons and the bond between them from the benzene ring (D) to which R³ and R⁴ are attached can form a ring system having up to two additional rings, each of said rings having 5-7 atoms, and

Q³ the ring attached to the benzene ring (D) optionally including one or more hetero atoms and being optionally substituted by lower alkyl,

provided that R³ and R⁴ are not simultaneously -OCH₃, and provided further that R⁴ is not -Cl when R³ is -NO₂;

R⁶ and R⁹ are independently selected from the group consisting of
H, and
lower alkyl that optionally may be substituted by OH and halogen;

R⁷ and R⁸ are independently selected from the group consisting of
H, and
lower alkyl that optionally may be substituted by OR⁶,

or, alternatively, R⁷ is H and R⁸ is OH,

or, alternatively, NR⁷R⁸ can optionally form a ring having 5-6 atoms, said ring optionally including one or more additional hetero atoms and being optionally substituted by the group consisting of one or more of OR⁶ and lower alkyl which itself may be optionally substituted by OH;

R¹⁰ is selected from the group consisting of
lower alkyl which optionally may be substituted by one or more chlorine or fluorine, and
NH₂;

Q³

R¹¹ is selected from the group consisting of

H, and

lower alkyl that optionally may be substituted by OR⁶, COOH, halogen and NR¹⁵R¹⁶;

R¹² and R¹³ are independently selected from the group consisting of

H,

lower alkyl that optionally may be substituted with a group selected from OR⁶, COOH and NR¹⁵R¹⁶,

COR¹⁷, and

SO₂R¹⁸,

provided that only one of R¹² and R¹³ is COR¹⁷ or SO₂R¹⁸,

or alternatively NR¹²R¹³ can optionally form a ring having 5-6 atoms, said ring optionally including one or more additional hetero atoms and being optionally substituted by the group consisting of one or more of OR⁶ and lower alkyl which itself may be optionally substituted by OH;

R¹⁴ is lower alkyl;

R¹⁵ and R¹⁶ are independently selected from the group consisting of

H, and

lower alkyl that optionally may be substituted by OH,

a³ or alternatively $\text{NR}^{15}\text{R}^{16}$ can optionally form a ring having 5-6 atoms, said ring optionally including one or more additional hetero atoms and being optionally substituted by the group consisting of one or more of OR^6 and lower alkyl which itself may be optionally substituted by OH;

R^{17} is selected from the group consisting of

H, and

lower alkyl which optionally may be substituted with a group selected from OH, COOH and $\text{NR}^{15}\text{R}^{16}$; and

R^{18} is lower alkyl.

2. (Original) The compound of claim 1 wherein R^1 is selected from the group consisting of H, $\text{CH}_2\text{CH}_2\text{OH}$, $\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$, $\text{CH}_3\text{CO}-$, $\text{CH}(\text{CH}_3)_2$, $\text{CH}_2\text{CH}(\text{CH}_3)_2$, cyclopropylmethyl and CH_3 .

3. (Original) The compound of claim 2 wherein R^1 is selected from the group consisting of H, methyl, $\text{CH}_2\text{CH}_2\text{CH}_2\text{OH}$ and $\text{CH}(\text{CH}_3)_2$.

4. (Original) The compound of claim 1 wherein R^2 is selected from the group consisting of H and fluorine.

5. (Original) The compound of claim 4 wherein R^2 is H.

6. (Original) The compound of claim 2 wherein R^2 is selected from the group consisting of H and fluorine.

- a³
7. (Original) The compound of claim 3 wherein R² is H.
 8. (Original) The compound of claim 1 wherein R³ is selected from the group consisting of OR¹¹, lower alkyl, NH₂, Cl, F, H, OCHF₂ and NO₂.
 9. (Original) The compound claim 6 wherein R³ is selected from the group consisting of OR¹¹, lower alkyl, NH₂, Cl, F, H, OCHF₂ and NO₂.
 10. (Original) The compound of claim 7 wherein R³ is selected from the group consisting of F, OCH₃ and CH₂CH₃.
 11. (Original) The compound of claim 8 wherein R³ is selected from the group consisting of F, OCH₃ and CH₂CH₃.
 12. (Original) The compound of claim 1 wherein R⁴ is selected from the group consisting of acetamido, chloro, diethylamino, hydrogen, hydroxy, hydroxy-ethylamino, [1-(hydroxymethyl)-3-methylbutyl]amino, 1-(3-hydroxymethyl) piperidinyl, 4-hydroxy-1-piperidinyl, methoxy, 2-methoxyethylamino, 2-methyl-1-pyrrolidinyl, morpholino, piperidinyl, pyrrolidinyl.
 13. (Original) The compound of claim 12 wherein R⁴ is selected from the group consisting of H and CH₃O-.

Q³

14. (Original) The compound of claim 9 wherein R⁴ is selected from the group consisting of acetamido, chloro, diethylamino, hydrogen, hydroxy, hydroxy-ethylamino, [1-(hydroxymethyl)-3-methylbutyl]amino, 1-(3-hydroxymethyl) piperidinyl, 4-hydroxy-1-piperidinyl, methoxy, 2-methoxyethylamino, 2-methyl-1-pyrrolidinyl, morpholino, piperidinyl and pyrrolidinyl.

15. (Original) The compound of claim 10, wherein R⁴ is selected from the group consisting of acetamido, chloro, diethylamino, hydrogen, hydroxy, hydroxy-ethylamino, [1-(hydroxymethyl)-3-methylbutyl]amino, 1-(3-hydroxymethyl) piperidinyl, 4-hydroxy-1-piperidinyl, methoxy, 2-methoxyethylamino, 2-methyl-1-pyrrolidinyl, morpholino, piperidinyl and pyrrolidinyl.

16. (Currently amended) The compound of claim 11, wherein R⁴ is selected from the group consisting of acetamido, chloro, diethylamino, hydrogen, hydroxy, hydroxy-ethylamino, [1-(hydroxymethyl)-3-methylbutyl]amino, 1-(3-hydroxymethyl) piperidinyl, 4-hydroxy-1-piperidinyl, methoxy, 2-methoxyethylamino, 2-methyl-1-pyrrolidinyl, morpholino, piperidinyl and pyrrolidinyl.

17. (Withdrawn) The compound of claim 1 wherein R³ and R⁴ taken together with the benzene ring to which they are attached form a polycyclic ring system.

18. (Withdrawn) The compound of claim 17 wherein the ring system is selected from the group consisting of 2-dibenzofuranyl, 1,3-benzodioxol-5-yl, 2,3-dihydro-1,4-benzodioxin-6-yl, and 3,4-dihydro-2H-1,5-benzodioxepin-7-yl.

19. (Withdrawn) The compound of claim 6 wherein R^3 and R^4 taken together with the benzene ring to which they are attached form a polycyclic ring system.

20. (Withdrawn) The compound of claim 7 wherein R^3 and R^4 taken together with the benzene ring to which they are attached form a polycyclic ring system.

21. (Withdrawn) The compound of claim 19 wherein the ring system selected from the group consisting of 2-dibenzofuranyl, 1,3-benzodioxol-5-yl, 2,3-dihydro-1,4-benzodioxin-6-yl, or 3,4-dihydro-2H-1,5-benzodioxepin-7-yl.

22. (Withdrawn) The compound of claim 20 wherein the ring system selected from the group consisting of 2-dibenzofuranyl, 1,3-benzodioxol-5-yl, 2,3-dihydro-1,4-benzodioxin-6-yl, or 3,4-dihydro-2H-1,5-benzodioxepin-7-yl.

23. (Withdrawn) The compound of claim 17 which is selected from the group consisting of:

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](2,3-dihydro-1,4-benzodioxin-6-yl)methanone,

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](1,3-benzodioxol-5-yl)methanone,

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](3,4-dihydro-2H-1,5-benzodioxepin-7-yl)methanone,

a³

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](2-dibenzofuranyl)methanone,

[4-Amino-2-[[3-fluoro-4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](1,3-benzodioxol-5-yl)methanone,

[4-Amino-2-[[4-[4-(1-methylethyl)-1-piperazinyl]phenyl]amino]-5-thiazolyl](2,3-dihydro-1,4-benzodioxin-6-yl)methanone,

[4-Amino-2-[[4-[4-(1-methylethyl)-1-piperazinyl]phenyl]amino]-5-thiazolyl](1,3-benzodioxol-5-yl)methanone,

1-Acetyl-4-[4-[[4-amino-5-[(1,3-benzodioxol-5-yl)carbonyl]-2-thiazolyl]amino]phenyl]piperazine, and

[4-Amino-2-[[4-[4-(2-hydroxyethyl)-1-piperazinyl]phenyl]amino]-5-thiazolyl] (2,3-dihydro-1,4-benzodioxin-6-yl)methanone.

24. (Withdrawn) The compound of claim 17 which is selected from the group consisting of:

[4-Amino-2-[[3-fluoro-4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl] (2,3-dihydro-1,4-benzodioxin-5-yl)methanone,

a³

(4-Amino-2-{4-[4-(2-methoxy-ethyl)-piperazin-1-yl]-phenylamino}-thiazol-5-yl)-benzo[1,3]dioxol-5-yl-methanone,

4-Amino-2-{4-[4-(2-methoxy-ethyl)-piperazin-1-yl]-phenylamino}-thiazol-5-yl)-(2,3-dihydro-benzo[1,4]dioxin-6-yl)-methanone,

{4-Amino-2-[4-(4-sec-butyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-benzo[1,3]dioxol-5-yl-methanone,

{4-Amino-2-[4-(4-sec-butyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(2,3-dihydro-benzo[1,4]dioxin-6-yl)-methanone,

{4-Amino-2-[4-(4-cyclopentyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-benzo[1,3]dioxol-5-yl-methanone,

{4-Amino-2-[4-(4-cyclopentyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(2,3-dihydro-benzo[1,4]dioxin-6-yl)-methanone,

{4-Amino-2-[4-(4-cyclopropylmethyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-benzo[1,3]dioxol-5-yl-methanone, and

{4-Amino-2-[4-(4-cyclopropylmethyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(2,3-dihydro-benzo[1,4]dioxin-6-yl)-methanone.

a³ 25. (Original) The compound of claim 1 wherein R⁵ is selected from the group consisting of H and F.

26. (Original) The compound of claim 25 wherein R⁵ is F.

27. (Withdrawn) The compound of claim 19 wherein R⁵ is F.

28. (Withdrawn) The compound of claim 22 wherein R⁵ is F.

29. (Original) The compound of claim 26 which is selected from the group consisting of:

[4-Amino-2-[[4-[4-(2-hydroxyethyl)-1-piperazinyl]phenyl]amino]-5-thiazolyl] (3,5-difluorophenyl)methanone,

{4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3,5-difluoro-phenyl)-methanone,

(4-Amino-2-{4-[4-(2-methoxy-ethyl)-piperazin-1-yl]-phenylamino}-thiazol-5-yl)-(3,5-difluoro-phenyl)-methanone,

{4-Amino-2-[4-(4-methyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3,5-difluoro-phenyl)-methanone, and

[4-Amino-2-(4-piperazin-1-yl-phenylamino)-thiazol-5-yl]-(3,4,5-trifluorophenyl)-methanone.

30. (Original) The compound of claim 25 wherein R⁵ is H.

31. (Original) The compound of claim 1 wherein at least one of R³, R⁴ and R⁵ is halogen.

32. (Original) The compound of claim 31 which is selected from the group consisting of:

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](3,4-dichlorophenyl)methanone,

[4-Amino-2-[[4-[4-(2-hydroxyethyl)-1-piperazinyl]phenyl]amino]-5-thiazolyl] (3-fluorophenyl)methanone,

[4-Amino-2-[[4-(1-piperazinyl)phenyl]amino]-5-thiazolyl](3-fluorophenyl)methanone,

(4-Amino-2-{4-[4-(3-hydroxy-propyl)-piperazin-1-yl]-phenylamino}-thiazol-5-yl)-(3-fluoro-phenyl)-methanone,

{4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-fluoro-phenyl)-methanone,

Q³ {4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3,4,5-trifluoro-phenyl)-methanone,

(4-Amino-2-{4-[4-(2-methoxy-ethyl)-piperazin-1-yl]-phenylamino}-thiazol-5-yl)-(3,4-difluoro-phenyl)-methanone,

(4-Amino-2-{4-[4-(2-hydroxy-ethyl)-piperazin-1-yl]-phenylamino}-thiazol-5-yl)-(3-fluoro-phenyl)-methanone,

{4-Amino-2-[4-(4-sec-butyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-fluoro-phenyl)-methanone,

{4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-fluoro-phenyl)-methanone, and

{4-Amino-2-[4-(4-cyclopropylmethyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-fluoro-phenyl)-methanone.

33. (Original) The compound of claim 1 wherein at least one of R³, R⁴ and R⁵ is selected from the group consisting of OR¹¹, OCF₃, and OCHF₂.

34. (Original) The compound of claim 33 which is selected from the group consisting of:

a³ [4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl]-(4-hydroxyphenyl)methanone,

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](4-methoxyphenyl)methanone,

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](3-fluoro-4-methoxyphenyl)methanone,

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](3-methoxyphenyl)methanone,

[4-Amino-2-[[3-fluoro-4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](3,5-dimethoxyphenyl)methanone,

[4-Amino-2-[[3-fluoro-4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](3-methoxyphenyl)methanone,

[4-Amino-2-[[4-[4-(1-methylethyl)-1-piperazinyl]phenyl]amino]-5-thiazolyl](3-methoxyphenyl)methanone,

[4-Amino-2-[[4-[4-(1-methylethyl)-1-piperazinyl]phenyl]amino]-5-thiazolyl] (3,5-dimethoxyphenyl)methanone,

a³ [4-Amino-2-[[4-[4-(2-hydroxyethyl)-1-piperazinyl]phenyl]amino]-5-thiazolyl] (3-methoxyphenyl)methanone, and

[4-Amino-2-[[4-(1-piperazinyl)phenyl]amino]-5-thiazolyl](3-fluoro-4-methoxyphenyl)methanone.

35. (Original) The compound of claim 33 which is selected from the group consisting of:

{4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-methoxyphenyl)-methanone,

(4-Amino-2-{4-[4-(3-hydroxy-propyl)-piperazin-1-yl]-phenylamino}-thiazol-5-yl)-(3-methoxy-phenyl)-methanone,

4-Amino-2-{4-[4-(2-methoxy-ethyl)-piperazin-1-yl]-phenylamino}-thiazol-5-yl)-(3-fluoro-4-methoxy-phenyl)-methanone,

{4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(4-fluoro-3-methoxy-phenyl)-methanone,

{4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-fluoro-4-methoxy-phenyl)-methanone,

a³ {4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(4-difluoromethoxy-phenyl)-methanone,

{4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-trifluoromethoxy-phenyl)-methanone,

(4-Amino-2-{4-[4-(2-methoxy-ethyl)-piperazin-1-yl]-phenylamino}-thiazol-5-yl)-(3-methoxy-phenyl)-methanone,

{4-Amino-2-[4-(4-methyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3,5-difluoro-4-methoxy-phenyl)-methanone, and

{4-Amino-2-[4-(4-methyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(4-fluoro-3-methoxy-phenyl)-methanone.

36. (Original) The compound of claim 33 which is selected from the group consisting of:

{4-Amino-2-[4-(4-methyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-trifluoromethoxy-phenyl)-methanone,

[4-Amino-2-(4-piperazin-1-yl-phenylamino)-thiazol-5-yl]-(3,5-difluoro-4-methoxy-phenyl)-methanone,

0³
[4-Amino-2-(4-piperazin-1-yl-phenylamino)-thiazol-5-yl]-(4-fluoro-3-methoxy-phenyl)-methanone,

[4-Amino-2-(4-piperazin-1-yl-phenylamino)-thiazol-5-yl]-(3-trifluoromethoxy-phenyl)-methanone,

{4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-trifluoromethoxy-phenyl)-methanone,

{4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-difluoromethoxy-phenyl)-methanone,

{4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-hydroxy-phenyl)-methanone,

{4-Amino-2-[4-(4-isobutyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-hydroxy-phenyl)-methanone,

[4-Amino-2-(4-piperazin-1-yl-phenylamino)-thiazol-5-yl]-(3-difluoromethoxy-phenyl)-methanone,

{4-Amino-2-[4-(4-cyclopropylmethyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-difluoromethoxy-phenyl)-methanone,

Q³ {4-Amino-2-[4-(4-cyclopropylmethyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-methoxy-phenyl)-methanone,

{4-Amino-2-[4-(4-cyclopropylmethyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-fluoro-4-hydroxy-phenyl)-methanone,

{4-Amino-2-[4-(4-methyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-difluoromethoxy-phenyl)-methanone,

{4-Amino-2-[4-(4-cyclopropylmethyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-fluoro-4-methoxy-phenyl)-methanone, and

{4-Amino-2-[4-(4-methyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-hydroxy-phenyl)-methanone.

37. (Currently Amended) The compound of claim 1 wherein each of R³, R⁴ and R⁵ is independently selected from H, NO₂, NHSO₂R⁴ and NR¹²R¹³.

38. (Original) The compound of claim 37 which is selected from the group consisting of:

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl][4-(1-pyrrolidinyl)phenyl]methanone,

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Filed: January 9, 2002

Q³ [4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl][4-(1-piperidinyl)phenyl]methanone,

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl][4-(4-morpholinyl)phenyl]methanone, acetate salt,

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](3-nitrophenyl)methanone,

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl][4-(diethylamino)phenyl]methanone,

N-[4-[[4-Amino-2-[[4-[4-(1-methylethyl)-1-piperazinyl]phenyl]amino]-5-thiazolyl]carbonyl]phenyl]acetamide,

[4-Amino-2-[[4-[4-(1-methylethyl)-1-piperazinyl]phenyl]amino]-5-thiazolyl] [4-(diethylamino)phenyl]methanone,

1-Acetyl-4-[4-[[4-amino-5-[4-(diethylamino)benzoyl]-2-thiazolyl]amino]phenyl]piperazine, trifluoroacetate salt,

[4-Amino-2-[[4-[4-(2-hydroxyethyl)-1-piperazinyl]phenyl]amino]-5-thiazolyl] [4-(1-pyrrolidinyl)phenyl]methanone,

[4-Amino-2-[[4-(1-piperazinyl)phenyl]amino]-5-thiazolyl][4-(1-pyrrolidinyl)phenyl]methanone, and

C³ [4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl][4-(2-hydroxyethyl)amino-3-nitrophenyl]methanone.

39. (Original) The compound of claim 37 which is selected from the group consisting of:

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl][3-nitro-4-(1-pyrrolidinyl)phenyl]methanone,

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl][3-nitro-4-(4-morpholinyl)phenyl]methanone,

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl][3-nitro-4-[(2-methoxyethyl)amino]phenyl]methanone,

racemic [4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl] [3-nitro-4-[3-(hydroxymethyl)-1-piperidinyl]phenyl]methanone,

racemic [4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl] [3-nitro-4-(2-methyl-1-pyrrolidinyl)phenyl]methanone,

Q³ (R)-[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl][3-nitro-4-[[1-(hydroxymethyl)-3-methylbutyl]amino]phenyl]methanone,

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl][3-nitro-4-(4-hydroxy-1-piperidinyl)phenyl]methanone,

[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl][3-amino-4-(4-pyrrolidinyl)phenyl]methanone, and

(R)-[3-Amino-4-[[1-(hydroxymethyl)-3-methylbutyl]amino]phenyl][4-amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl]methanone.

40. (Original) The compound of claim 37 which is selected from the group consisting of:

[4-Amino-2-[[3-fluoro-4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl] [4-(1-pyrrolidinyl)phenyl]methanone,

(4-Amino-2-{4-[4-(3-hydroxy-propyl)-piperazin-1-yl]-phenylamino}-thiazol-5-yl)-(3-nitro-phenyl)-methanone,

{4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(4-piperidin-1-yl-phenyl)-methanone, and

{4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(4-morpholin-4-yl-phenyl)-methanone.

Q³

41. (Original) The compound of claim 1 wherein any one or more of R³, R⁴ and R⁵ is CN.

42. (Original) The compound of claim 41 which is selected from the group consisting of:

3-(4-Amino-2-{4-[4-(3-hydroxy-propyl)-piperazin-1-yl]-phenylamino}-thiazole-5-carbonyl)-benzonitrile,

3-{4-Amino-2-[4-(4-isopropyl-piperazin-1-yl)-phenylamino]-thiazole-5-carbonyl}-benzonitrile, and

3-{4-Amino-2-[4-(4-methyl-piperazin-1-yl)-phenylamino]-thiazole-5-carbonyl}-benzonitrile.

43. (Original) The compound of claim 1 wherein each one of R³, R⁴ and R⁵ is independently selected from H and lower alkyl.

44. (Original) The compound of claim 43 which is selected from the group consisting of:

a³
(4-Amino-2-{4-[4-(3-hydroxy-propyl)-piperazin-1-yl]-phenylamino}-thiazol-5-yl)-m-tolyl-methanone,

(4-Amino-2-{4-[4-(3-hydroxy-propyl)-piperazin-1-yl]-phenylamino}-thiazol-5-yl)-(3-ethyl-phenyl)-methanone,


{4-Amino-2-[4-(4-methyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-(3-ethyl-phenyl)-methanone, and

{4-Amino-2-[4-(4-methyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}-m-tolyl-methanone.

45. (Currently amended) The compound of claim 1 wherein at least one of R³, R⁴ and R⁵ is selected from S-lower alkyl.

46. (Currently amended) The compound of claim 45 which is {4-Amino-2-[4-(4-methyl-piperazin-1-yl)-phenylamino]-thiazol-5-yl}(3-methylsulfanyl-phenyl)-methanone.

47. (Currently amended) A The compound ~~selected from the group consisting of:~~

 ~~[4-Amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](2,3-dihydro-1,4-benzodioxin-6-yl)methanone, and~~

[4-Amino-2-[[4-[4-(1-methylethyl)-1-piperazinyl]phenyl]amino]-5-thiazolyl] (3-methoxyphenyl)methanone.

48. (Withdrawn) The compound 1-(4-isothiocyanatophenyl)-4-(1-methylethyl) piperazine.

49. (Withdrawn) The compound 4-(2-hydroxyethyl)-1-(4-isothiocyanatophenyl) piperazine.

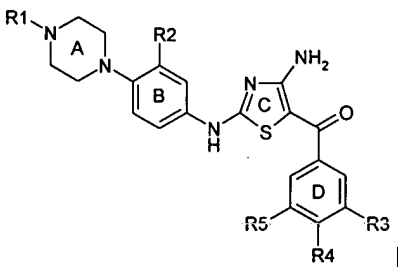
50. (Withdrawn) The compound carbamimidothioic acid, [[4-(4-methyl-1-piperazinyl) phenylamino]thioxomethyl], polymer bound.

51. (Withdrawn) The compound carbamimidothioic acid, [[4-[4-(1-methylethyl)-1-piperazinyl]phenylamino]thioxomethyl], polymer bound.

52. (Withdrawn) The compound carbamimidothioic acid, [[4-[4-(2-hydroxyethyl)-1-piperazinyl]phenylamino]thioxomethyl], polymer bound.

a³

53. (Currently amended) A compound of formula:



or the pharmaceutically acceptable salts or esters thereof, wherein

R¹ is selected from the group consisting of

H, and

lower alkyl that optionally may be substituted by OR⁶;

R² is selected from the group consisting of H and F;

R³ is selected from the group consisting of

H,

lower alkyl

halogen,

NR¹²R¹³,

NO₂,

OCHF₂, and

OR¹¹;

a³
R⁴ is selected from the group consisting of

H,

lower alkyl that optionally may be substituted by OR⁶,

halogen,

NR¹²R¹³,

or alternatively, R³ and R⁴ taken together with the two carbons and the bond between them from the benzene ring (D) to which R³ and R⁴ are attached can form a ring system having up to two additional rings, each of said rings having 5-7 atoms, and the ring attached to the benzene ring (D) optionally including one or more hetero atoms and being optionally substituted by lower alkyl,

provided that R⁴ is not -Cl when R³ is -NO₂;

R⁵ is selected from the group consisting of

H,

OR¹¹, and

F;

R⁶ is selected from the group consisting of

H, and

methyl;

R¹¹ is selected from the group consisting of

H, and

lower alkyl that optionally may be substituted by a group selected from OR⁶, COOH, halogen and NR¹⁵R¹⁶;

R¹² and R¹³ are independently selected from the group consisting of

H,

lower alkyl that optionally may be substituted with a group selected from OR⁶, COOH and NR¹⁵R¹⁶,

or alternatively NR¹²R¹³ can optionally form a ring having 5-6 atoms, said ring optionally including one or more additional hetero atoms and being optionally substituted by the group consisting of one or more of OR⁶ and lower alkyl which itself may be optionally substituted by OH; and

R¹⁵ and R¹⁶ are independently selected from the group consisting of

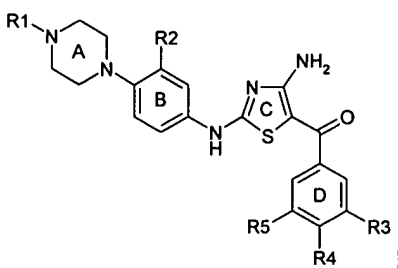
H, and

lower alkyl that optionally may be substituted by OH,

or alternatively NR¹⁵R¹⁶ can optionally form a ring having 5-6 atoms, said ring optionally including one or more additional hetero atoms and being optionally substituted by the group consisting of one or more of OR⁶ and lower alkyl which itself may be optionally substituted by OH.

54. (Original) A compound of formula:

a³



or the pharmaceutically acceptable salts or esters thereof, wherein

R¹ is selected from the group consisting of

H,
CH₂CH₂OH,
CH₂CH₂CH₂OH,
CH₃CO-,
CH(CH₃)₂,
CH₂CH(CH₃)₂,
cyclopropylmethyl, and
CH₃;

R² is selected from the group consisting of

H and F;

R³ is selected from the group consisting of

a³

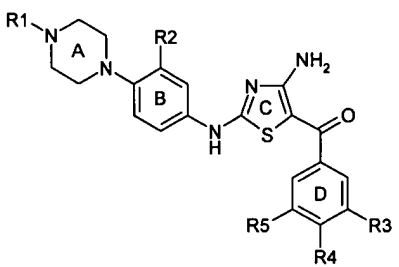
OR¹¹,
lower alkyl,
NH₂,
Cl,
F,
H,
OCHF₂, and
NO₂;

R⁴ is selected from the group consisting of
H, and
diethylamino;

R⁵ is H; and

R¹¹ is unsubstituted lower alkyl.

55. (Original) A compound of formula:



or the pharmaceutically acceptable salts or esters thereof, wherein

A³

R¹ is selected from the group consisting of

H,
CH₂CH₂CH₂OH,
CH(CH₃)₂,
CH₃, and
cyclopropylmethyl;

R², R⁴ and R⁵ are H; and

R³ is selected from the group consisting of

OCH₃,
F, and
CH₂CH₃.

56. (Original) A pharmaceutical composition comprising as an active ingredient an effective amount of a compound of claim 1 and a pharmaceutically acceptable carrier or excipient.

57. (Original) The pharmaceutical composition of claim 56 which is suitable for parenteral administration.

Claims 58-59 (Canceled).

60. (Currently amended) ~~The A~~ method of ~~claim 59 wherein the solid tumor~~
~~is a~~ treating breast, colon, lung or prostate tumor cancer comprising administering to a
subject in need of such therapy a therapeutically effective amount of a compound
according to claim 1.

61. (Withdrawn) A compound selected from the group consisting of:

1-(2-Fluoro-4-isothiocyanatophenyl)-4-methylpiperazine,
1-(1-Methylethyl)-4-(4-nitrophenyl)piperazine,
4-[4-(1-Methylethyl)-1-piperazinyl]benzenamine,
1-(4-Isouthiocyanatophenyl)-4-(1-methylethyl)piperazine,
4-(2-Hydroxyethyl)-1-(4-isothiocyanatophenyl)piperazine,
1-(4-Isouthiocyanatophenyl)-4-(2-methoxy-ethyl)piperazine,
1-(4-Isouthiocyanatophenyl)-4-(1-methylpropyl)piperazine,
4-Cyclopentyl-1-(4-isothiocyanatophenyl)piperazine,
1-(4-Isouthiocyanatophenyl)-4-(2-methylpropyl)piperazine, and
4-(3-Hydroxypropyl)-1-(4-isothiocyanatophenyl)piperazine.

62. (Withdrawn) A compound selected from the group consisting of:

2-Bromo-1-(3,4,5-trifluoro-phenyl)ethanone,
2-Bromo-1-(4-fluoro-3-methoxy-phenyl)ethanone,
2-Bromo-1-(4-fluoro-3-methoxy-phenyl)ethanone, and
2-Bromo-1-(3-difluoromethoxy-phenyl)ethanone.

63. (Withdrawn) A compound selected from the group consisting of:

a³

Carbamimidothioic acid, [[4-(4-methyl-1-piperazinyl)phenylamino] thioxomethyl], polymer bound,

Carbamimidothioic acid, [[3-fluoro-4-(4-methyl-1-piperazinyl)phenylamino] thioxomethyl], polymer bound,

Carbamimidothioic acid, [[4-[4-(1-methylethyl)-1-piperazinyl]phenylamino] thioxomethyl], polymer bound,

Carbamimidothioic acid, [[4-(4-acetyl-1-piperazinyl)phenylamino]thioxo-methyl], polymer bound,

Carbamimidothioic acid, [[4-[4-(2-hydroxyethyl)-1-piperazinyl]phenylamino] thioxomethyl], polymer bound,

Carbamimidothioic acid, [[4-[4-[(1,1-dimethylethoxy)carbonyl]-1-piperazinyl] phenylamino]thioxomethyl], polymer bound,

Carbamimidothioic acid, [[4-[4-(2-methoxyethyl)-1-piperazinyl] phenylamino] thioxomethyl], polymer bound,

Carbamimidothioic acid, [[4-[4-(1-methylpropyl)-1-piperazinyl] phenylamino] thioxomethyl], polymer bound,

Q³
Carbamimidothioic acid, [[4-(4-cyclopentyl-1-piperazinyl)phenylamino]
thioxomethyl], polymer bound,

Carbamimidothioic acid, [[4-[4-(2-methylpropyl)-1-piperazinyl] phenylamino]
thioxomethyl], polymer bound, and

Carbamimidothioic acid, [[4-[4-(3-hydroxypropyl)-1-piperazinyl] phenylamino]
thioxomethyl], polymer bound.

64. (Original) A compound selected from the group consisting of:

[4-amino-2-[[4-(4-methyl-1-piperazinyl)phenyl]amino]-5-thiazolyl](4-chloro-3-
nitrophenyl)methanone,

4-[4-[[4-Amino-5-(3-fluorobenzoyl)-2-thiazolyl]amino]phenyl]-1-
piperazinecarboxylic acid, 1,1-dimethylethyl ester,

4-[4-[[4-Amino-5-[4-(1-pyrrolidinyl)benzoyl]-2-thiazolyl]amino]phenyl]-1-
piperazinecarboxylic acid, 1,1-dimethylethyl ester, and

4-[4-[[4-Amino-5-(3-fluoro-4-methoxybenzoyl)-2-thiazolyl]amino]phenyl]-1-
piperazinecarboxylic acid, 1,1-dimethylethyl ester.

NE!!
65. (New) The compound [4-Amino-2-[[4-(4-methyl-1-
piperazinyl)phenyl]amino]-5-thiazolyl](2,3-dihydro-1,4-benzodioxin-6-yl)methanone.